CLAIMS

1. A method of imaging an object for dental purposes, comprising the steps of:

a) projecting a striped pattern on to the object to be imaged,

b) recording the projected striped pattern as a basic image (R_i) with a picture receiver at an angle other than the angle of projection,

steps a) and b) being carried out at a number of different positions of the phase relation of the striped pattern, and

c) computing an image of said object from the plurality of basic camera images that are out-of-phase with each other (R_1..., R_n),

wherein in order to suppress periodic disturbances, i.e., noise, in step c),

c1) forming from the basic camera (R_1,..., R_m) images at least two groups of basic images (R_1,R_2..., R_n; R_2, and R_3..., R_n+1),

c2) computing a phase related image (P_j) of the object to be imaged from each group of basic images (R_1, R_2, ..., R_n; R_2, R_3, ..., R_n+1)

c3) averaging the computed phase related images (P_1, P_2) such that a phase related image (P) having a reduced amount of noise is formed, and

c4) computing an image of the object to be imaged from the phase related image (P) having a reduced amount of noise.

2. A method as defined in claim 1, wherein the computed phase related images (P_1, P_2) are averaged with weighting factors.

3. A method as defined in claim 1, wherein the basic images (R_1..., R_m) are each recorded with a constant shift of the phase relation of the lattice (19).

4. A method as defined in claim 1, wherein

- (n+1) basic images (R_1, R_2, ..., R_n+1) are recorded, successive basic images showing a phase shift,

- two groups of basic images (R_1, R_2, ..., R_n; R_2, R_3, ..., R_n+1) are formed,

- a first phase related image (P_1) is computed from the first group of basic images (R_1, R_2, ..., R_n) and a second phase related image (P_2) is computed from the second group of basic images (R_2, R_3..., R_n+1), and

- the first phase related image (P_1) and the second phase related image (P_2) are averaged, in order to obtain a phase related image (P) having a reduced amount of noise, n being an integer at least equal to 3.

5. A method as defined in claim 1, wherein

- (n+2) basic images (R_1, R_2..., R_n+2) are recorded, of which successive basic images show a phase shift,

- three groups of basic images (R_1, R_2, ..., R_n; R_2, R_3, ..., R_n+1; R_3, R_4, ..., R_n+2) are formed,

- a first phase related image (P1) is computed from the first group of basic images (R_1, R_2, ..., R_n), a second phase related image (P2) is computed from the second group of basic images (R_2, R_3, ..., R_n+1), and a third phase related image (P_3) is computed from the third group of basic images (R_3, R_4, ..., R_n+2), and

- the first phase related image (P_1) and the third phase related image (P_3) are averaged, in order to obtain an intermediate image (Pz), and the second phase related image (P_2) and the intermediate image (Pz) are averaged, in order to obtain a phase

related image (P) having a reduced amount of noise, n being an integer at least equal to 3.

6. A method as defined in claim 4, wherein n is 4.

7. A method as defined in claim 1, wherein the basic images (R_1, ..., R_m) are recorded by an interlacing method so that the two fields are out-of-phase with each other.

8. A method as defined in claim 7, wherein the two fields show a phase shift relative to each other which is equal to half the phase shift between successive basic images (R_1, ..., R_m).

9. A method as defined in claim 7, wherein a phase related image (P_1, P_2) is computed from each of the fields of a basic image (R_1, ..., R_m) and the two phase related images (P_1, P_2) are averaged prior to further processing in such a manner that a phase related image (P) having a reduced amount of high-frequency noise is formed.

10. A method as defined in claim 1, wherein prior to step a), an image of a specific test object is recorded and that on the basis of an analysis of the image of the test object a suitable scheme for use in the computation of the noise-reduced phase related image for the object to be imaged is selected.

11. A method as defined in claim 1, wherein the object to be imaged and a camera used for recording the projected striped pattern can be freely positioned relative to each other.

12. A method as defined in claim 1, wherein an image of one or more teeth in a oral cavity of a patient is recorded by manual surveying over a short measurement period.

13. A method as defined in claim 1, wherein the image to be created of said object is one of a relief image and a contrast image.

14. A device for carrying out the process as defined in claim 1, comprising

- projecting means for projecting a striped pattern on to the object to be imaged,

- a camera for recording the projected striped pattern in the form of a basic image (R_1, ..., R_m) and

- means for computing an image of the object to be imaged from a number of basic camera images (R_1, ..., R_m) that are out-of-phase with each other with formation of at least two groups of basic images (R_1, R_2, ..., R_n; R_2, R_3, ..., R_n+1).